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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,082	01/13/2005	Dirk Naumann	PC-4200/USA	4428
7590 Inco Patents & Licensing Park 80 West Plaza Two Saddle Brook, NJ 07663			EXAMINER ZHU, WEIPING	
			ART UNIT	PAPER NUMBER
			1742	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/06/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,082	<b>Applicant(s)</b> NAUMANN ET AL.	
	<b>Examiner</b> Weiping Zhu	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 20-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/13/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

The application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.4999, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted

- I. Claims 1-19, drawn to a method for fabricating an open-porous body,
- II. Claims 20-34, drawn to an open-porous molded body.

The inventions listed as I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Geibel et al. (US 6,436,163) disclose a porous metal filter having a tubular configuration and possessing enhanced anticorrosive properties comprising a porous body of densified and sintered particles including an alloy composition of iron aluminide (claims 1 and 7), which anticipates claim 20 of the instant application. See MPEP 1850. Inventions I-II lack the same or corresponding special technical features. Therefore unity of invention is lacking and restriction is appropriate.

During a telephone conversation with Mr. Edward A. Steen on March 27, 2007 a provisional election was made with traverse to prosecute the invention of I, claims 1-19. Affirmation of this election must be made by the applicant in replying to this Office

action. Claims 20-34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should the applicant traverse on the ground that the inventions are not patentably distinct, the applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

The applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm et al. (WO 03/033192 A2) in view of Whitlock (US 6,382,318).

With respect to claim 1, Bohm et al. ('192 A2) disclose a process for producing a sintered porous body formed from nickel or iron and at least another metal, which forms intermetallic phases on the surface, comprising (page 4, lines 6-30):

applying a suspension/dispersion comprising an organic binder and at least a metallic powder, which forms an intermetallic phase to a porous basic body;

removing the organic components during a first thermal treatment; and

sintering the porous body to form the intermetallic phase.

Bohm et al. ('192 A2) do not teach the shaping step as claimed.

Whitlock ('318) discloses a method for shaping a porous body into a desired shape (col. 5, lines 18-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to shape the porous body into a desired shape in the process of Bohm et al. ('192 A2) as disclosed by Whitlock ('318) in order to enable the porous body to endure the radially outward forces without damage as disclosed by Whitlock ('318) (col. 1, lines 64-67)

With respect to claim 2, Bohm et al. ('192 A2) in view of Whitlock ('318) do not specify that shaping is first performed after depositing the binder and the powder upon the surface of the porous body as claimed. However it would have been obvious to one of ordinary skill in the art to perform the shaping in the claimed sequence in the process of Bohm et al. ('192 A2) in view of Whitlock ('318), because the shaping would be much more difficult after the formation of the brittle and hard intermetallic phase on the surface of the porous body during the thermal treatments.

With respect to claims 3 and 19, Bohm et al. ('192 A2) disclose that sintering-active powders or powder mixtures comprise nickel and aluminum, which form intermetallic phases (page 4, lines 32-39).

With respect to claim 13, Bohm et al. ('192 A2) disclose that the suspension/dispersion comprising organic binders and powders is deposited on to the porous basic body by dipping or spraying such that the open pore structure is maintained and merely the ridges of the pores are coated (page 6, lines 22 to page 7 line 4).

With respect to claim 14, Bohm et al. ('192 A2) disclose that the amounts of the binder and the powders to be applied to the porous body could be controlled to a desired level (page 6, line 32 to page 7, line 8). It would have been obvious to one of ordinary skill in the art to remove the excessive binder and powders by pressing together, blowing through and /or exhausting as claimed, because Bohm et al. ('192 A2) disclose using the similar methods to apply the binder into the porous body (page 6, lines 22-30) or remove the binders from the porous body (page 9, lines 4-7).

With respect to claim 15, Bohm et al. ('192 A2) disclose that the powders or powder mixtures can be applied to the porous body by spraying or pressure support comprising pressing the powders into the porous body or sucking the powders through it (page 6, lines 22-30). It would have been obvious to one of ordinary skill in the art that these operations would cause vibrations of the powders in a microscopic scale.

With respect to claim 16, Bohm et al. ('192 A2) disclose that the porous body of nickel is commercially available from INCO (page 9, lines 4-5) without specifying the thickness of the nickel porous body prior to coating and shaping as claimed. It would have been obvious to one skilled in the art that to select a desired thickness as claimed in the commercially available porous body of nickel would have been within the scope of Bohm et al. ('192 A2)'s invention.

With respect to claims 17 and 18, Bohm et al. ('192 A2) disclose that the first and second thermal treatments are carried out at 450° C for 30 minutes and 1030° C for 1 hour respectively (example 2, page 9). These temperatures and the corresponding times are within the claimed temperature and time ranges respectively. A prima facie case of obviousness exists. See MPEP 2144.05 I.

With respect to claims 4-12, Whitlock ('318) discloses that the porous body is deformed into a hollow cylinder and hollow cylinders are joined to each other with respectively adapted outer and inner diameters (col. 5, lines 18-23) as claimed in the instant claims 4 and 5; that the porous body is deformed in a plurality of layers helically around a longitudinal axis in a wrapped shape (col. 5, lines 18-23) as claimed in the instant claim 6; that a porous body is surrounded by a metal perforated cage (col. 2,

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lines 35-37 and col. 10, lines 34-42) as claimed in the instant claims 7-9; and that a metal strip is wrapped in between helically wrapped layers (col. 6, lines 45-49) as claimed in the instant claims 10 and 12. Whitlock ('318) does not specify that the metal strip is perforated as claimed in the instant claim 11. However, it would have been obvious to one of ordinary skill in the art that the metal strip of Whitlock ('318) would be perforated in order for the porous body to function as a filter.

It would have been obvious to one of ordinary skill in the art to mold the porous body of Bohm et al. ('192 A2) into a filter with the configurations as disclosed by Whitlock ('318) in order to achieve desired performance of the porous metal filter as disclosed by Whitlock ('318) (col. 1, line 64 to col. 2, line 2).

### ***Conclusion***

3. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZ

3/30/2007

  
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